

4. (Once Amended) The apparatus of claim 1, wherein said first control signal and said second control signal each comprise a plurality of pulses.

10. (Once Amended) The apparatus of claim 7, wherein said third and said fourth control signals each comprise a train of pulses.

32. (Once Amended) A method of transmitting a baseband signal over a wireless LAN, comprising the steps of:

(1) spreading the baseband signal using a spreading code, resulting in a spread baseband signal; and

(2) differentially sampling the spread baseband signal according to a first control signal and a second control signal resulting in a plurality of harmonic images that are each representative of the baseband signal.

39. (Once Amended) In a wireless LAN device, a method of down-converting a received RF signal, comprising the steps of:

down-converting said received RF signal according to a first control signal and a second control signal, resulting in a down-converted signal, wherein said second control signal is delayed relative to said first control signal by $.5 + n$ cycles of said received RF signal, wherein n may be any integer greater than or equal to 1;

de-spreading said down-converted signal using a spreading code, resulting in a de-spread signal; and

de-modulating said de-spread signal, resulting in a de-modulated signal;

wherein said first and said second control signals each comprise a train of pulses.